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ABSTRACT

Intended to help compensatory education personnel better understand the role of the arts in cognitive growth, this booklet provides practical suggestions for using arts strategies in basic education. Following a discussion of the role of the arts in the learning process, the booklet presents a number of activities that involve the interaction of eye, ear, touch, and kinesthetic sense with the rational processes of the brain. Using dance, drama, music, and art, the activities assist in developing specific language skills. Suggestions for developing teacher/learner interaction and for organizing this approach into an existing program are also presented. (FL)

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THE ARTS & COMPENSATORY EDUCATION

Michigan State Board of Education

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Foreword

The Arts and Compensatory Education is the work of a unique group of educators addressing a new but important task. Developed by a first grade teacher trained in creative dramatics, a music teacher who teaches reading and math objectives through music, a dance educator who works with basic learning concepts, a puppeteer who trains teachers to use creative dramatics to teach reading objectives, and an art educator who creates visual experiences to reinforce all learning processes, this booklet is intended to help Compensatory Education personnel better understand the role of the arts in cognitive growth. It also provides some practical suggestions for using arts strategies in basic education. For their imaginative ideas and thoughtful perspectives, I want to thank:

Edward Jacomo, Art Department, Alma College
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In addition, I would like to commend Eugene T. Paslov, Director of School Program Services of the Michigan Department of Education and his staff of able editors: Sharon McColl, the J.D. Rockefeller 3rd Administrative Fellow for the Arts in Education and Barbara Carlisle, Fine Arts Specialist.

We would like to have your reactions and observations. Please address any comments to Fine Arts, School Program Services, Michigan Department of Education, P.O. Box 30008, Lansing, MI 48909.

John W. Porter
Superintendent of Public Instruction

May, 1979

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Why The Arts In Compensatory Education?

Compensatory education is a programmatic effort to improve the basic skills of students with learning disadvantages. Basic skills in this context means language skills (reading, writing, listening and speaking) and computational skills (arithmetic, measurement, geometry).

While learning specific arts skills for their own sake is an essential part of elementary education, the incorporation of the arts in compensatory education implies a different and unique approach. This approach is not concerned with the highly structured activities of putting on plays, learning ballet or square dance steps, learning to play an instrument, or learning the techniques of linear perspective. Instead, it places emphasis upon the child's exploration, invention, and selection of ideas through the media of dance, music, visual materials and creative dramatics.

In order to clarify the role that the arts play in learning, it is necessary to understand just how children process information. Research indicates that the organization of learning occurs at three levels of experience. First, the child uses action to manipulate and come to terms with the environment and through these sensory experiences, builds a repertoire of referents that can be used for interpretation of new experiences.

Second, the many aspects of sensory experiences are processed through observing, comparing, classifying, ordering, interpreting, summarizing, and imagining.

Third, children translate experience into symbols — verbal and non-verbal representations. As children develop the ability to communicate what they see, hear, feel, taste, and smell, they extract meaning from these experiences. This, in turn, helps children to build concepts in various ways.

What, then, is the role of the arts in this learning process?

1. **The arts can expand and broaden the essential sensory link experiences.** For example, for children to distinguish differences between the letters p, q, b, d, they have to build their experiences of "left, right, up, down." Directional awareness in creative dance and dramatic play have, therefore, been included as necessary ingredients in remedial reading programs.

The mathematical concepts of more, less and equal can be represented in sculpture, in colored design or in many other sense experiences of sound, touch, taste, vision or smell.

As children experience and become increasingly aware of the texture, shape, movement, color, line, rhythm, energy, design, weight or patterns that surround life, they are building concepts about the world. These concepts build on past experiences and continually deepen as the child learns to use ideas in progressively more complex forms.

2. **The arts require children to practice the same learning operations that are present in other forms of learning.** In the arts: (a) the child **experiences, experiments**, and **explores** in order to perceive and discover, (b) the child **processes those experiences** by observing, comparing, classifying, ordering, interpreting, summarizing, and imagining, and (3) the child formulates some new arrangement in order to **make meaning of the experiences** and to communicate them to others. In this way, the child is experiencing the basic operations of perceiving, decoding, abstracting, arranging that are fundamental components of the learning process.

In the learning process, play is fundamental. The first learning is play and it is the child's work. The arts help to nurture the instinct to play — to think in images, to pretend, to test possibilities, to set limits, to make rules, to debate consequences, to define roles, to judge, and to enjoy the results of the game. The playing we engage in as adults helps to keep alive our creative thinking processes. When teaching utilizes play, it takes advantage of one of the most available resources in the growing mind.

3. **The artistic process is itself a problem solving process.** The arts involve conceptual, imagistic and critical thinking. In order to create something in one of the arts there must be an idea, a means for carrying out the idea, and a personal commitment to the end. There must be a goal, some weighing of the alternative strategies for reaching the goal, and some judgment about the success of the accomplishment of each of the steps. The creative process may begin as a teacher-directed activity, but essentially becomes self-directed. Children as artists gradually become the agents of their own experiences, making decisions based on ideas and feelings and becoming increasingly responsible for their own learning.

4. **The arts provide new ways of measuring children's capabilities.** Artistic endeavors reveal new insights about a child's thoughts, feelings, skills, and imagination. New alternatives for behavior can help the teacher discover ways of responding to, communicating with and aiding individual children. The arts give children alternative modes of demonstrating that they understand a concept even though they may not be able to articulate it through language.

5. **Engaging children in arts processes helps the child to discover the self and to value that self.** Not all children learn the same things in the same way, but all children have the need to make decisions unique to themselves. They all have potential for creative behavior. Often when children are unaware of their own thinking, they lack any confidence in their ability to solve problems. They expect to fail at new tasks and repeatedly fail at old ones, convinced that they cannot learn. Finally, they have little self esteem and begin to fail at interpersonal relationships as well. The vicious

circle of the slow learner closes in on itself.

Through the artistic process of exploring various possibilities and alternatives, selecting, and making decisions, children become more aware of their own thought processes, and begin to believe in their own ability to make decisions. Because these decisions lead to a wide variety of solutions rather than right and wrong answers, each child begins to value that sense of personal uniqueness.

As children share their ideas, they gain new respect for alternative ideas and gradually become more willing to reveal their ideas and feelings to others. Creating in the arts is participation in primary activity which is shared with many other human beings. Participating and sharing arts experiences develop a sense of belonging and help students to understand and value both the familiar and unfamiliar worlds they encounter.

Arts activities which involve group participation and which depend upon every child's unique contribution help all children to establish avenues for communication and to develop mutual respect. A wide variety of learning activities makes possible a range of roles and a range of levels for interaction.

6. **Motivation and enjoyment are essential ingredients in the learning environment.** The arts can be a powerful medium for sustaining interest and increasing total involvement. When a child becomes involved in working with various media and pursuing her or his unique idea, the inseparable aspects of the personality — the psychomotor, cognitive, and affective domains — all interweave into a more integrated whole.

The arts then can provide ways for aiding and increasing children's learning in different ways and at various levels. Since the arts require the same learning operations as other forms of learning, they provide new avenues for building essential sensory experiences, for developing confidence as one succeeds at the problem solving process and for increasing motivation at being able to communicate understanding in alternative modes. When utilized from a conceptual base of development, the arts can be an effective and exciting method for reaching children in Compensatory Education programs.

How Does It Happen

The arts must be integrated into the teaching process of general education objectives. This integration occurs at the conceptual level. In order to teach something effectively, it is essential to understand the basic concept of the objective. When we articulate some of the basic concepts involved in mathematics and language, we can then identify an almost endless number of ways that those concepts can be taught and evaluated, particularly if we have the resources of the arts available. As children are given the opportunity to participate in the arts as something connected to many other areas of knowledge, they acquire tools for becoming the directors of their own learning.

The **Minimal Performance Objectives for Communication Skills Education in Michigan** identifies skills in reading, writing, speaking, and listening that can be developed in the arts. Among those are vocabulary meaning, comprehension, organization of ideas, critical listening, and group discussion. Listed below are selected dance, drama, music, and art activities for developing specific language skills.

I. BASIC COMPETENCIES: VOCABULARY MEANING (ACTION WORDS), SENTENCE STRUCTURE, AND SEQUENCING (EFFECTIVE K-6)

Activity: Making action sequences

Rationale: By creating movement to express the meaning of words, students clarify the meaning for themselves and communicate it to others. Through composing sequences of actions that are repeated, they strengthen their experience of the elements of a sentence: the essential concepts of beginning, middle and end and the concept of doer doing something.

Needed materials:

clean, open space (a gym or classroom with chairs pushed back)
chalkboard

Behavior:

With students, the teacher compiles a list on the board of traveling (locomotor) words:

jump	skip	turn
hop	gallop	crawl
run	slide	leap
walk	roll	somersault

With students, the teacher compiles a list of "in place" (non-locomotor) words:

twist	curl	rise	shake
bend	look	fall	push
stretch	freeze	sway	pull

The teacher should make up several action sentences composed of three to four movements in a sequence to guide the students' initial experience and give them an understanding of what to do. The children may then compose, in any combination, their own "action sentences" consisting of a **sequence** of 3, 4, or 5 words. (Each child individually chooses the desired number of actions so that each action sequence is different. Each "sentence" should include both locomotor and non-locomotor words.)

Run — Freeze — Look — Look
Skip — Explode — Twist
Run — Jump — Sink — Roll — Rise

Have the students verbalize the action as they execute it. This will help them to remember it. Encourage students to try many different combinations finding several that **feel good to do.** Children can try out various movements so that the phrases have what they consider to be an "ending." (This beginning trial and experimentation could take from one to several sessions.) Lastly, students make a sequence selection

Sequencing action words

practicing it enough times so that it is memorized. This increases the child's concentration, ability to join, organize, and remember a sequence of actions. Following the dance activity, the children may want to talk about the sentences, and write them putting in necessary transition words.

Hints For A Successful Activity: Remind students to respect each other's working space. **Before** working on the task, talk about and practice moving about the room safely, without bumping or interfering with others. Establish a signal for stopping. This could be the words "and . . . stop," a drum beat, a raised hand. Children are learning to **listen, concentrate** and **move** at the same time; teachers must insist on this behavior.

Measurement: The children make action sentences that appropriately reflect the chosen words. They organize their movements so they can repeat the sequences. They write sentences after the activity that accurately describe their actions.

Deeper Involvement

As students progress and feel confident about their chosen sequence, they may share their movement phrase with another person. Ask them to learn each other's phrase; this will build a longer sequence of action and give a shared challenge.

Give the students choices as to how they may wish to **organize** their **sequences.** Do they want to do it in unison or sequentially (one starting first, then the other begins)?

When they know and can repeat the movement phrase, the addition of vocal sounds will add a musical and richer element in the experience..

(sssssss	pa!	ch	ch)
(run	freeze	look	look)

The teacher should have the total class do some preliminary experimenting with vocal sounds in order to give the children sound ideas from which to choose. Have the class try:

buzzing	lip pops	vowels
hissing	tongue clicks	consonants
snoring	animal sounds	blends
	humming	

Each student or small group may wish to combine several sounds into a "sound sentence" that could lead to the development of voice pieces. It is not necessary that students perform their dances. The process of choosing action words and developing their ideas has been significant. However if students **are** interested in sharing their dances, avoid having one pair perform before the whole class. Each pair may share with

another couple or half of the room perform for the other half.

As the students develop skill in using action words (verbs) the teacher may want to expand their vocabulary by adding modifiers (e.g. space words, feeling words, time words, energy words). Students may keep some of their action sentences, but now add variations from class compiled lists:

Actions	Space Factors	Modifiers
twirl	forward	lightly
spin	backward	heavily
gallop	diagonally	smoothly
collapse	to the floor	erratically
leap	to the ceiling	quickly
pounce	over	slowly
lean	under	lazily
crawl	around	energetically
thrust	toward	angrily
creep	away from	calmly

Ex: walk/in a circle/lightly
twist/on a low level/angrily

These modifiers can also be used in the experimentation of vocal or instrumental sound making.

Ex: play a drum/heavily
buzz/lazily

Teachers may want to put all the words on individual cards (color coded according to actions, space factors, modifiers). Have the students draw their cards from a pile, mixing them in endless combinations. Children should be aware that the mood or quality of the action sentence is significantly changed by the modifier. These variations not only broaden the conceptual understanding of modifiers but also change the kinesthetic or internal feel of the movement; this adds new excitement to the experience.

As children grouped together or separately combine several action sentences into more complex dances, they also can compose descriptive paragraphs of the dances using the new words. They should discuss the idea of a whole composition with many parts and they may also express their feelings about the dances. All these experiences develop vocabulary and the ability to sequence language.

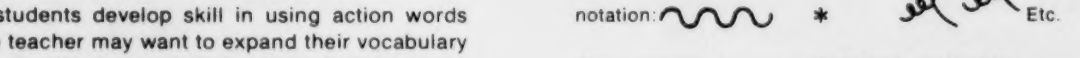
Additional Activities:

Vocabulary Development and Sequencing

Keeping a Log

Adopt a tree, patch of ground or an animal. Visit it daily and keep a picture and/or written log on changes occuring there. This sharpens children's observing and listening skills as well as their awareness of time. For deeper development, the log could be developed into a mural, into a drama with a non-human as the main character (e.g. an ant who spoke using only words beginning with "a") or a sound narrative with the sounds notated in any way by the child.

Ex: sound: hummmmmm Boop! shee-lum/shee-lum

notation:  Etc.

story:	ground	out popped	caterpillar
	is	caterpillar's	crawls slowly
	silent	head	toward plant . . .

Fantasy Face:

As the children enter the room, have a pair of scissors on each desk and a scrap of construction paper. At the head of the row have one large sheet of paper cut to the shape of a head and neck. Write on the back the name of a character. Pass the face back and let each child add a feature. Bring the faces up from the back of the room and tack them up. You might want to continue the rest of the body sequence on future days. Encourage the children to make up stories about the people.

II. COMPETENCY: LISTEN CRITICALLY

Activity: Use a television set or a radio. Turn the set toward the wall and have the volume on. Ask the children to describe the characters (people on the television). Draw what you think the characters look like. Use fabrics, colors, gestures, or designs to represent the characters. Turn the set around to find out what they really look like. Each should discuss the reasons for the selections.

Another variation of this idea is to play a tape or record of familiar instruments and sounds (cymbal, drum, guitar, typewriter, saw) and see if the children can identify them or interpret them in another medium.

Rationale: Translating information received through the ear alone to visual, physical or textural clues encourages the child to listen critically and to process the information in an individual manner. This is practice in problem solving that allows for open ended responses. The child then justifies the response verbally, expanding vocabulary experiences.

Needed materials: TV set or radio, crayons, paper, or scraps of cloth, magazine illustrations.

Behavior: Explain to the students that they are going to practice listening carefully. They are also going to have the opportunity to show what the characters would be like if they were scraps of cloth, designs or colors, and they will share their reasons with each other.

Measurement: All students have reasons for their choices that relate accurately to what characters said. (There are no **fixed interpretations** but careful and critical listening can be judged.)

Additional Activities: Critical Listening.

Rhythm Sequence: This is a rhythm sequence played in echo fashion. Teacher begins by saying, "Clap with me, clap with me, 1, 2, 3," and class echoes the words and movements. "Pat with me, pat with me, 1, 2, 3," Children repeat. Teacher then combines them: "Clap with me, pat with me, stamp with me and snap" (fingers). The game may be repeated several times but each time, change the second actions to new one. (e.g. nod your head, turn

around, blink your eyes, show your teeth, jump up and down, touch the sky). Finally, discuss with the class how the song goes: "What did we do first, second, always? Where was it the same? When was it different?" When they discover that the second part is always different, they may become leaders and make up their own ideas.

III. COMPETENCY: IDENTIFY ANTONYMS

Activity: Using crayons or markers and large sheets of paper, have the children make a funny or ridiculous picture by reversing things, making them upside down or backwards. What if a tire had four cars on it? Perhaps a sail boat had an ocean on it? A poor flea has a bad case of dogs.

Activity: With students develop a list of opposite words:

big — little	up — down
high — low	light — heavy
fast — slow	straight — curved
curled — stretched	happy — unhappy
rigid — loose	smooth — jagged
loud — soft	slippery — sticky
long — short	open — closed
inside — outside	excited — bored

Doubled with another child, each couple finds several different ways of demonstrating the contrast through movement, drawing, modeling, arranging objects (such as sandpaper and glass), or musical sounds. This same activity can be done for **synonyms.** The children select objects that have the same texture or same color. They may group similar sounds or find as many words as possible to describe a particular movement or feeling (glide, slide; or smooth, sleek, glassy, etc.)

Measurement: The activity is self measuring. When the children understand the concept of synonym and antonym they will choose appropriate words, objects and gestures.

Deeper involvement: The children may make a composition using cutouts from old magazines or catalogues illustrating a series of opposites. They may write simple poems using a list of synonyms.

IV. COMPETENCY: READING COMPREHENSION

Activity: Reading Comprehension includes such objectives as identifying the main idea, identifying details to support the main idea, understanding the sequence of events, understanding characters, motivations, and making inferences from explicit information. The following activity groups these objectives in a creative dramatics exercise. It is effective for grades 2-6.

Needed materials:

a classroom with open space in one area
some sound making instruments (blocks, drum, sticks, piano, bells, tin cans, whistles, or Orff instruments)
large pieces of paper
writing tools
blackboard

Behavior: Have students begin by warming up. Do stretching, bending, or other simple movement, and practice some sounds like humming, hissing. Choose a theme. Monsters are always good. On the blackboard, write in heads of columns:

Creating a character

WHO/WHAT KIND/HAS A PROBLEM/MAKES IT FEEL/ SOLVES IT BY/NOW FEELS

Start the group making monster movements. When one person comes up with one have everyone try it. After trying three or four, ask for some descriptive words (make a stiff monster, a lazy monster, a twisted monster, an angry monster). As descriptors come up, ask for movements to go with words. Put the descriptive words down on the board under WHAT KIND. Divide the class into small groups (2, 3) and ask them to choose (or make up) a particular kind of monster and have the monster meet up with a serious problem. They will have to explain how the monster feels about the problem and what the monster does to show how it feels. They are to write this in two or three sentences on their big sheet of paper. Explain that the **main idea** of the story is that the monster has a problem.

Next, pass the sheets of paper around the room, and have each group take one to act out using movements and sounds. Explain that we will know how the monster feels by what it does. The group that acts out the story must make up a solution to the problem and explain how the monster feels at the end. Allow about ten to fifteen minutes for the groups to practice.

Hint: During the performances, expect giggles and varying amounts of proficiency. As children are working on their monster stories, go around to each group, especially those who are just sitting. Ask them questions like:

What if your monster had three legs?

What if your monster got out of the problem by turning into a puff of smoke?

What if your monster — ?

Ask questions that stimulate thinking about **sequences, actions, feelings, consequences,** and **motivations.**

For example: Did it feel frustrated? How will it act? Does your monster feel disappointed? How do you know? What do you do when you feel sorry? angry? How can you tell when a character feels happy?

An important element for the student is the writing out of the problems and solutions and the sentences that tell how the character feels and why it does something. But equally important is letting the students find a way to communicate the events to others through actions, movement, sound, words.

After each presentation, ask the observers . . .

Suggest a title for this one.

What was the main event? or, Did this have a main event?

How did the monster feel when —

(Vary the questions — make sure every child talks)

Do you agree?

(To the presenters) How would you change it to make it better?

Follow up later in the day:

Tack all of the stories (by now 4 — 6 sentences each) up around the room.

Each student takes a problem and adds some details to it. Ask students to describe what a **detail** is. Be sure the concept is clear. **Keep the main idea.**

These suggestions may help the writers get started.

The problem existed because . . .

The solution worked because . . .

The problem would have gone away, but . . .

The other solutions might have helped, but . . .

Before the monster met up with the big problem, it . . .

Now that the problem is solved, it can . . .

This activity helps children understand and practice the concepts of "main idea" and "details."

If possible, xerox the stories and put them into a book for all to keep. This book can be used to discuss feelings, main ideas, motivation and sequence. It becomes a reading book for the whole class.

Measurement: Review the stories carefully and discuss them with the children independently. This is your test for mastery of the concepts. In reviewing the stories, ask the child what is the main idea. Ask them what are less important ideas. Ask them about the other stories if mastery is not certain.

Note the logic of motivations, feelings and actions. Don't dispute them so much as ask the children to explain them if they are confusing. Have other stories at hand to ask the children to identify the feelings and motivations of the characters. Again, if there is repeated confusion, it may be necessary to go back to simple games of acting out movements of discouragement, sadness, surprise, relief, fear, and the physical sensations of cold, heat, weariness, energy. During these "physicalizations" talk about the relationships of the actions and feelings. Remember, if the concept of motivation is lacking, the reading and writing ability will not create it.

Rationale: Why the movement, the acting out, the big sheets of paper? Many children learn and express themselves best using the large muscles of their bodies. The stories can come out if there are sounds and gestures to help. Words can then follow. Writing is less formidable if it is an adjunct to other activity rather than if it is the principal focus. Writing large makes the project more like art work. Since the educational goal here is conceptual development, it is wise to involve as much of the child in the process as possible.

Finally, solving problems (in this case, the problem of creating a problem for the monster and finding a solution for it) is a complex intellectual process that goes on in images, movements, sounds and physical sensations all at once. Some people see a solution before they verbalize it; others feel it (Einstein has said that he understood the theory of relativity first as a physical, kinesthetic sense before he came up with words or a formula for it). It is important to let young minds develop using all of their faculties. This is the

essence of the creative process and is basic to learning at all ages.

The **Michigan Minimal Performance Objectives for Mathematics** includes skills in arithmetic, measurement, and geometry. Listed below are selected dance, drama, music, and art activities for developing the skills of classifying, ordering, patterning, equivalents, sets, geometric shape, counting and place value.

I. COMPETENCIES: CLASSIFYING AND ORDERING

These are two key skills in K-3 mathematics learning.

Activity: Collecting is a way of studying, cataloguing, classifying. This can also be a way of developing an awareness and appreciation for the many subtle and varied differences in nature. What would be interesting to collect? buttons? dolls? barbed wire? seed pods? wish bones? shells? brown-eyed, three-toed caterpillars? In order to collect, a child must identify a category of objects. Discuss with children the idea of categories, i.e. that objects have certain similar characteristics. Let them choose what they will collect and be sure they are consistent in their characteristics.

Measurement: Have the children stayed with their category definitions? Be sure they can explain why they are not to mix shells and bones, or stones and seeds (unless they are collecting **round** objects, or **smooth** objects, or **tiny** objects.)

From these collections a child can create a mosaic, a collage, or an assemblage by putting things together according to various additional categories or ordering systems. They may be glued on a mat, arranged in a sculpture, or pressed into clay, or any means of fixing their positions. The child needs to understand and articulate the system that is being used.

For example: Collected or found objects can be ordered . . .

According to color:	lightest to darkest
texture:	roughest to smoothest
	sharpest to softest
smell:	least to most fragrant
shape:	thickest to thinnest
taste:	bitter to sweet
size:	largest to smallest

Sounds and movement can also be ordered:

Sound	Movement
highest to lowest	highest to lowest
loudest to softest	biggest to smallest
fastest to slowest	fastest to slowest
longest to shortest	strongest to weakest
	longest to shortest

Rationale: The ordering in compositions will have the double benefit of allowing the child to make aesthetic choices, i.e. patterns that please the artist's eye or ear or physical sense, while practicing the problem solving of identifying the **system** of ordering. The element of play is involved, and the children grow in sensitivity to subtle differences while they are learning the basic concepts of numeration.

II. COMPETENCIES: PATTERNING, EQUIVALENTS, AND SETS (EFFECTIVE K-6)

Activity: Collected or found objects can be arranged in various ways that can lead to establishing visual, auditory, and movement patterns that can be repeated. This is a more complex system of ordering and leads to understanding of sets, or groups of like combinations.

rock	rock	wish bone	-concrete object
●	●	◠	-art
jump	jump	stretch	-movement
so	so	mi	-song syllables
shaker	shaker	drum	-music on home made instruments

Discussion of similarities and differences in establishing pattern could grow from any activity. Patterns can repeat or develop variations.

Activity: Begin by using home made instruments, the voice, or sound makers from available objects. Suggestions for instruments are things that might produce shaking, scratching, ringing, striking, and rubbing sounds which could branch into additional discussions of similiarities and differences. Children may work individually, in pairs or in groups. Start by establishing a sound pattern such as loud, soft, soft, soft. Children can create movement to go with it (with the first movement also being different in some way than the remaining three).

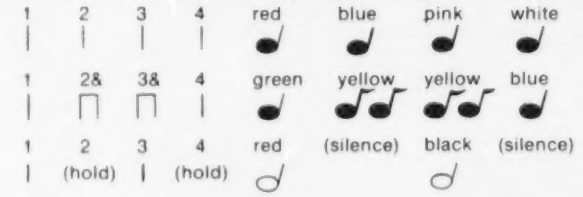
How can the pattern be represented through visual shape? color? texture? Explore the idea of equivalents through matching patterns in various media.

How does music notation look?

How does the look of musical notes translate into sound?

Can you make your own symbol to represent the sounds you make or hear?

Activity: Using names, countries, colors, automobiles, and vocabulary lists, children say and clap rhythmic patterns, noting the syllables as beats. Then the teacher establishes a set of steady beats using various words.

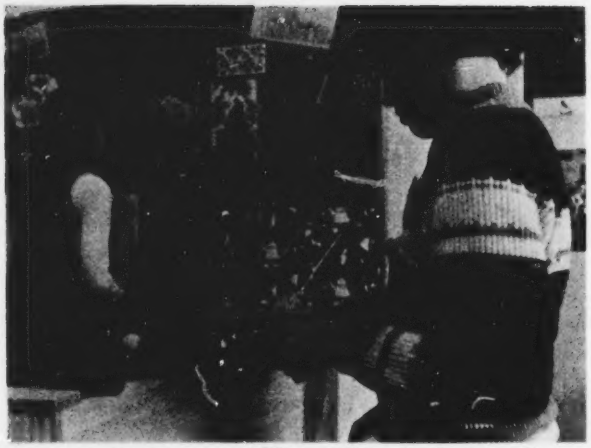


Hint: | = 1 beat in 1 clap

⊓ = 1 beat in 2 short claps

These patterns may be done one at a time or, when the children are sure of them, they may be done simultaneously. Begin with Group #1, add Group #2, and when they are going well, add Group #3. When it is clear that all the patterns take up the same amount of time (four beats) children can experiment with other equivalent time patterns.

The rhythmic patterns can also be done on instruments. Children may combine two or more patterns into



Discovering rhythmic patterns

a longer sequence. Number concepts can be introduced as part of the musical experience by giving the beats number values. More complex changes will lead to mixing combinations of 2 to 1, 3 to 1. This discussion leads well into fractions as children explore dividing up a beat into smaller parts.

Activity: Use "echo clapping" or "echo movement", i.e. a leader claps a pattern, all repeat it. Rhythms of familiar songs are good. Begin with short phrases of no more than four counts, lengthening the phrase to more counts as the children become more proficient. Vary the patterns by using different combinations of knee pats, stamps, claps or other body movement. For further development, encourage children to make up their own "songs," using numbers, words and multiplication tables.

Measurement: This activity is self measuring. The child is asked to create a pattern taking the same amount of time, or to notate or represent in another medium the elements of a pattern. If the understanding is absent the child will not be able to provide the solution. A teacher can take the children back through the playful steps — making and repeating a pattern in words, actions, colors or shapes, sounds or objects and help them identify the sets and equivalents, clarifying during the creative activity the conceptual base.

Activity: Begin with a discussion of or pictures of various kinds of clocks and utilize a clock song for stimulation such as "Are You Sleeping," and "Wake Up Clock" (Ginn, Magic of Music, Book 2) "Grandfather's Clock," "Hickory, Dickory, Dock." (Effective K-4)

1. Find a way to keep time with the song — shrug shoulders, nod heads, bend knees, wiggle toes, tap thumbs.
2. Discuss and make a list of all kinds of clock sounds to include ding, dong, tick, tock, bong, cuckoo, ticky ticky.
3. Discuss similarities and differences in each sound word. long-short? light-dark? high-low? shiny-dull? smooth-bumpy? soft-hard?
4. Each child creates a movement idea for the sounds. Encourage use of the whole body, not just arms and legs.
5. Color the sound words. Is a "ding" light and bright or dark and dull? This can be done on a large mural size sheet of paper, for the whole class, or on large paper for each individual.
6. Find an appropriate instrument for each sound. Utilize and experiment with an assortment of rhythm instruments or any other materials that would offer a variety of sound.

How are all these clocks going to keep time together?

Chant the clock sounds, finding the rhythm for each. Using lines, notate the length of time or duration of each sound word:

Bong ——— Tick Tock — — Cuckoo ○○ ○○

Establish a beat and have the clocks join in one at a time. Make up a story about a clockmaker and his workshop of fantastic clocks. Wind them up and let the clocks dance about the room with their selected clock movements and sounds.

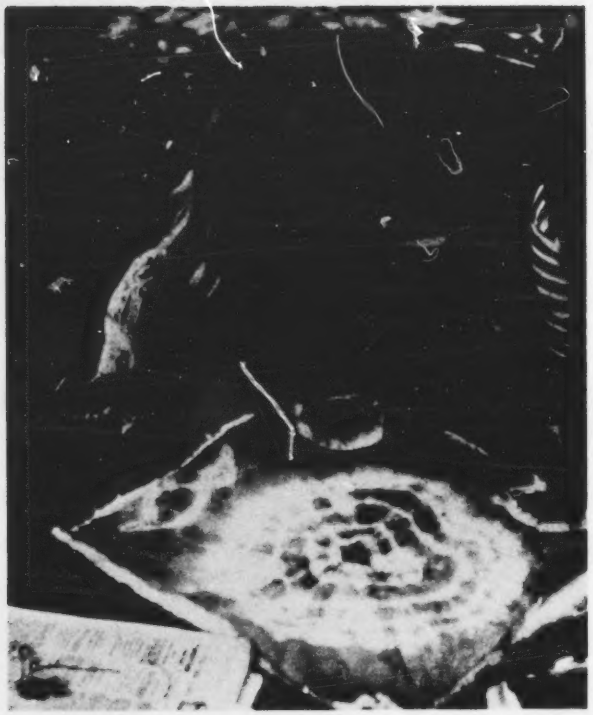
III. COMPETENCY: GEOMETRIC SHAPE

Activity: Exploration of Shape (Effective K-6)

On each desk is a paper cup filled with fine sand or salt. A small 6" x 6" piece of paper is placed under the cup. Talk about shapes and how they change with the children. Ask them to pour the sand slowly onto the paper. Notice that from a high cone shape, the shape changes to a circle. What does the shape do when the paper is lifted at the corner? From two opposite corners? When a hole is punched, with a pin or pencil point, into the middle? Draw shapes or numbers into the sand with fingers and pencils.

Activity: Using ○△□▭ shapes, design a postage stamp and coin for a new kingdom. The stamp might be to honor the brave new bean sprouts and the coin to celebrate "King-Carrot" in the Kingdom of Vigaro Vegetables. What kind of stamps and coins would honor vitamins A and B Complex? Imagine coins with mice, gophers, and guinea pigs on them? Or what kind of coins would a colony of earthworms have? Perhaps they'd have an honorary stamp for Sir Grower Grub-worm. Talk about the value of stamps. Are the triangles going to be worth two squares? Reinforce the relationships and equivalencies.

Activity: Have the child look for ○△□▭ shapes in the room, outside, in the library, in oneself (eyes, nose, feet, head). Draw the shapes in the air, or on the floor, with an elbow, foot, finger, nose, both hands. Have the children sculpt themselves into these shapes with their whole body. Walk the shapes as large pathways in a big space. Make geometric shapes using more than one person. Two children may work comparing shapes: 1) make one that is smaller than the other, 2) make one that is larger, 3) make two that are the same shape, 4) make two that are different, 5) make one shape that fits inside another shape. Have each child select 3, 4, or 5



Making geometric shapes

different shapes that can be arranged into a phrase. Each shape should flow smoothly into the next shape as they are connected together. The child freezes his last shape at the end of his dance. Accompanying the final composition with one's own vocal sounds, or improvisation on homemade instruments will aid in transforming the shape experience into a dance experience. Working with ropes or long loops of elastic gives an added excitement to making geometric shapes with the body.

Deeper Involvement: The teacher may want to expand into additional concepts such as symmetry and asymmetry. In groups of three, children can explore, then select two symmetrical and three asymmetrical group designs. Each group then slowly moves from one design to another, sequencing the designs in alternating fashion (asymmetrical — symmetrical — asymmetrical — symmetrical — asymmetrical). Cutting shapes from paper and arranging them in symmetrical and asymmetrical compositions or tie-dyeing fabric reinforces the concept of shapes and equivalents.

Measurement: Try this device for a testing activity. Provide each child with an 8x10 piece of construction paper and a marker. Ask them to draw the figure while you dictate. Include whatever concepts you wish to measure. Be sure to mix playful possibilities with the serious ones. Repeat each direction and allow about 20 seconds for the drawing.

1. Draw the creature's head. It is shaped like a triangle.
2. The hair on this creature stands straight up on its head in parallel lines.
3. Its eyes are small circles.
4. Its nose is shaped like a rectangle.
5. Its mouth is a semi-circle.
6. Its neck is thick. (repeat)
7. Its body is shaped like an oval.
8. Its arms are skinny, long, and hang below the body. (repeat)
9. Its hands have six fingers. (repeat)
10. It has on a painted collar and a wide necktie. (repeat)
11. It has three buttons down the front of its body. (repeat)
12. It has a square pocket on the left side of its body. (repeat)
13. It has short, stubby, legs with dimples in its knees. (repeat)
14. It has webbed feet.

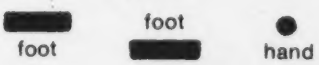
Other activities: Name your creature. What does it eat? Where does it live? What are its hobbies? How does it earn a living? Write a short adventure story about this creature.

You can easily identify the understanding of geometric shapes. (Effective 3-6).

V. COMPETENCY: COUNTING AND PLACE VALUE

Activity: In this creative movement activity using different parts of the body as bases of support, the teacher guides the children to explore various numbers and number relationships.

Ask the children to support their weight by using five points of body contact with the floor. Ask them to show five bases of support using a different combination of body contacts. Repeat the exploration to reinforce numerical values. The teacher may want to add one base at a time or subtract one at a time to reinforce these processes. Another variation would include using odd or even points of support. To add form and the feeling of having completed a movement composition or dance, the children may join, sequence, or choreograph number combinations such as the room number, their telephone number, their address. Only one digit of the number should be done at a time. For zero, use **no** contact with the floor (such as a jump). Be sure to clarify the concept of removing (subtracting) and adding as the activity advances. Drawing floor plans or maps of the bases of support



may add another perceptual dimension.

Deeper Involvement (4-6):

Give the students a piece of white and a piece of black 8½ x 11 construction paper. Ask them to cut the white paper into little pieces of any shape they want (suggest strips, or squares, or many sided pieces). The pieces need to be small enough to have at least 20 of them.

Have them lay the black paper on a flat surface and then arrange the white pieces on the paper to express different ideas as you suggest them.

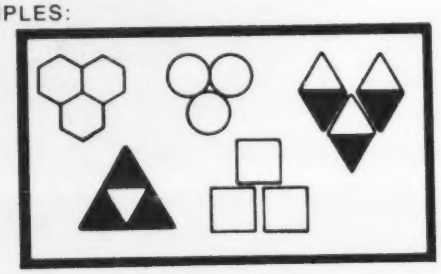
1. Show with a design the idea of growing.
2. Show the idea of shrinking.

Have children walk around and look at each other's designs.

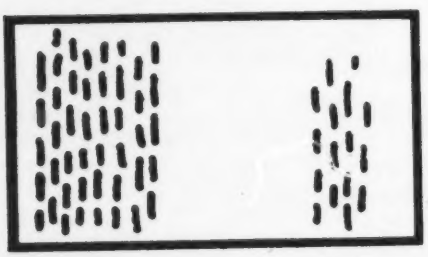
3. Show the idea of sets of 3's.
4. Show the idea of multiplying by 2.

The children may need help getting started with simpler concepts, i.e. the idea of **few**, the idea of **many** or show **few** and **many** together.

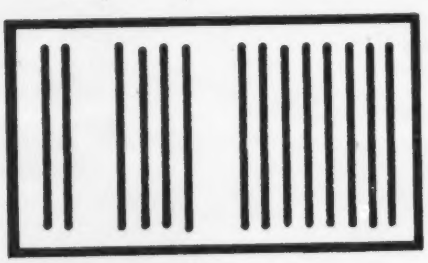
EXAMPLES:



sets of three



many few



multiply by 2

These are only a few suggested activities for teaching basic skills in ways that involve interactions of the eye, ear, touch, and kinesthetic sense with the rational processes of the brain. There are hundreds of others as well as variations on these that may enhance learning for the child whose reading comprehension is below grade level or who lacks the mathematic concepts to perform basic operations. These activities are designed to awaken dormant problem solving abilities and to stimulate creativity and self-direction in the learner. They may also expose new avenues for teachers.

Teacher/Learner Interaction

I. CREATING THE ELEMENT OF TRUST IN THE ENVIRONMENT

Teachers must be aware that any creative experience involves an "emotional risk" on the part of the student.

Something is happening in every child, even those who are standing by. If the child says, "I don't want to," simply say, "Oh, you want to watch now. Fine. If you want to join in, just participate anytime." There should exist the kind of non-judgmental atmosphere that will give the student the emotional support to explore new ideas. Trying to respond to each child by recognizing and acknowledging each solution helps to accomplish this. The teacher may make non-judgmental, personalized comments such as:

"Oh, you made a triangle and a square."

"You made a small-large, large-small pattern."

"You have a B word and a D word in your set. Is that what you want?"

II. SETTING STANDARDS FOR BEHAVIOR

Some people are uneasy that the freedom of arts activity may turn into chaos. This must not happen or the educational process is lost. Set limitations that **you** can live with and keep to them. "As we move about the room, be careful not to bump into anyone or hurt anyone. We must talk softly enough not to disturb the next room". "Cut the paper carefully so everyone uses only one sheet because that is all we have." One idea that may help is to allow anything that doesn't **interfere** with others.

When the teacher sets a task, it should be open-ended and stated in such a way that there can be a variety of responses. Have the integrity to accept each student's answer, as long as it deals with the problem. The limitations of the problem are defined in the objective. If the objective is to create a sequence that **repeats,** a sequence that does **not** will need to be worked with until it does and the **child** understands the difference.

III. VALUING IMAGINATION AND THE VARIETY OF RESPONSES

One of the strong features about the arts is that they individualize learning. If the given task to the class is to find movement that clarifies the contrasting concepts of curved and straight, there can be a myriad of responses — all correct and some you may never have anticipated. Children's involvement can occur at different levels of understanding but this differentiation needs to be accepted and valued.

Avoid stressing that one child is doing something "correctly". This sets an example of what the teacher wants and restricts the variety of responses. If you feel the class needs some modeling to get started, it is important to provide several alternatives.

Encourage students to seek out a variety of responses and not to be satisfied with their first or most obvious

response. Ask many "what if" questions:

"What if the shapes in your pattern started at the bottom of the page?"

"What if you did your movement bigger and in a larger space?"

"What if you made the sound last a very long time?"

Acknowledge children's feelings in the experience by asking questions such as:

"Is that what you wanted to do?"

"What do you like best about what you did?"

"If you did it again, would you do it differently? How?"

"Can you compare this to something else you've done?"

"Does your solution have an interesting beginning and ending?"

"Can you change it so it will please you more?"

"Does this show how you feel?"

It is important that the teacher value the creative experience as much as the learning of the skills objective. The child must believe that the artistic effort matters and that the problem is worth solving in the best possible way. Only then will the child internalize the concepts necessary to the solution of the artistic problem and at the same time apply personal energy to realize that solution. The children must feel that their best effort will be appreciated in all its dimensions.

Program Organization

How Can You Integrate These Approaches Into Your Title I and Chapter 3 Programs? Here are some alternatives.

A. Bring in arts specialists to do training programs for all staff working with compensatory education children. Title I and Chapter 3 money can be used for professional development. Training should consist of workshops, in-school sessions and follow-up observations and discussions.

B. Arts specialists can work with whole classrooms in which Compensatory Education students are based if they focus on specific conceptual skills. The regular teachers identify these specific concept areas and a person trained in arts strategies works with a whole classroom. Utilizing the arts media, children who have had difficulty in traditional situations may be successful, thus gaining some needed self confidence and peer approval.

C. Arts specialists can work exclusively with identified students, focusing on individual objectives with arts strategies.

D. Arts specialists can be teamed with classroom teachers to act as consultants and to provide special activities for identified students.

E. Summer programs can be designed for identified students. These may utilize arts trained personnel for special time blocks, e.g. creative dramatics, dance, music, visual arts. These should not be regarded as simply enrichment or playtime, but should be tuned to specific objectives for the summer session. Arts specialists may train faculty for summer school activities, or a summer program might use an arts specialist on a day to day consulting basis.

Great care and attention need to be paid to the development of arts components in Compensatory Education programs. Persons in the arts must work closely with reading and math teachers so they all understand their mutual goals for students. The success of any program will depend on the thoroughness with which each child's individual learning needs are met through the arts processes. No one should expect instant results in every area, but with precise attention to the quality of each student's participation, real growth in a broad range of necessary skills can result.

Evaluation systems which acknowledge a variety of modes of expression should be devised to monitor students' progress. These may include observation checklists, qualitative descriptions, logs, tapes, and portfolios of student art work as well as written testing measures. The monitoring should include the development of a child's ability to deal with concepts in many forms, the child's verbal growth, the child's problem solving skills, the development and complexity of the child's sensory-motor abilities, and the child's self-motivation and self-satisfaction as well as the mastery of isolated word or computational skills.

If the arts approach to basic education is designed within a highly conscious and sensitive mechanism it can make significant positive differences for students. The educators who have prepared this booklet urge its readers to explore the unmined riches of the arts for Michigan Compensatory Education programs.

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